

Remarks

Claims 1-13 & 21-23 are at issue. Claims 14-20 have been cancelled as non-elected claims. The new claims do not require an additional fee since there are still only three independent claims and less than 20 total claims. The new claims are fully supported by the specification. Claims 1-2 stand rejected under 35 USC 102 (b) as being anticipated by Hata et al (6,310,092). Claim 3 stands rejected under 35 USC 103(a) as being unpatentable over Hata et al (6,310,092). Claims 1, 4-8 stand rejected under 35 USC 103(a) as being unpatentable over Patel et al (US2003/0102555) in view of Konaka et al (US 6,556,423). Claims 7, 12-13 stand rejected under 35 USC 103(a) as being unpatentable over Hashemi et al (US 5,049,979) in view of Akram et al (2004/0036157A1).

All three independent claims (1, 7 & 21) require that the capacitor be contained within a bump on an integrated circuit. Hata (6,301,092 B2), Hashemi (5,049,979) and Konaka (6,556,423) are all concerned with discrete capacitors. Since the claims require that the capacitor be contained within a bump of the integrated circuit, none of these are now applicable. Patel et al (US 2003/102555 A1) discusses placing capacitors between traces on the integrated circuit of the substrate, but does not discuss how to create the capacitor in the ball of an integrated circuit. Akram et al (US 2004/0036157 A1) discusses creating a capacitor inside of the integrated circuit. The capacitor is not formed in bump of the integrated circuit. Akram's system will take valuable real estate in the integrated circuit to make, while the present invention has no effect on the real estate of the integrated circuit. Claims 1, 7 and 21 are allowable over the prior art.

Claims 2, 3, 5 & 8 are allowable as being dependent upon an allowable base claim.

Claim 4 requires the first electrode be adjacent to the aluminum lead of the IC. Patel shows the first electrode adjacent to a bump or a trace, but not the aluminum lead of the IC. The aluminum lead of the IC is a trace that is part of the internal circuitry of the IC, not an input/output lead.

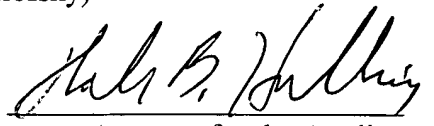
Claim 6 requires the second electrode be the base for a bump. This is clearly not shown in Akram or Patel. The capacitor is not part of the bump of an IC in either of these references. Claim 6 is allowable.

Claim 9 requires that a portion of the nickel electrode be deposited on the passivation layer of the IC. Clearly the nickel electrode is not deposited on the passivation layer in Akram. Claim 9 is allowable.

Prompt reconsideration and allowance are respectfully requested.

Respectfully submitted,

(Philofsky)

By 

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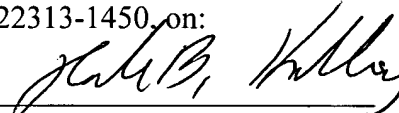
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